

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008815**Date Inspected:** 29-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 715**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Chen Xi, Mr. Gio Yan Fei, Mr. Zhao Chen Sun.

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG Bay 1**

ZPMC issued "Inspection Notification Sheet" number 4091 informing QA that ZPMC has completed ultrasonic inspections of the following OBG corner assembly welds: CB001B-PP068-001, CB001B-PP068-002, CB001B-PP068-003, CB001B-PP080-001, CB001B-PP080-002 and CB001B-PP080-003. This QA Inspector observed weld CB001B-PP080-003 has been marked by ZPMC ultrasonic inspectors as being UT accepted and the other welds are either marked as being UT rejected or the welds lack any markings to indicate the status of the UT inspections. This QA Inspector performed ultrasonic inspections of approximately 10 percent length of weld CB001B-PP080-003 and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.

**OBG Bay 8**

ZPMC issued "Inspection Notification Sheet" number 4100 informing QA that ZPMC has completed ultrasonic

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## WELDING INSPECTION REPORT

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inspections of the following OBG welds: CB202B-013-001, CB202B-013-003, CB202C-013-001, CB202C-013-003, CB202C-013-004, CB202D-013-001, CB202D-013-002, CB202E-013-001, CB202E-013-002, CB202E-013-003, CB202F-013-001 and CB202F-013-002. This QA Inspector observed weld CB202B-013-001 has not been marked by ZPMC QC personnel as being ultrasonically accepted and the other welds have all been marked as being ZPMC UT accepted. This QA Inspector performed ultrasonic inspections of approximately 10 percent length on each of the welds listed above, with the exception of weld CB202B-013-001, and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

### OBG Bay 9

This QA Inspector observed ZPMC welder Mr. Xiang Jie, stencil 59378 is using flux cored welding procedure WPS B-T-2231-B-U2-F to make U OBG deck plate U rib splice weld DP3048-001-014. This QA Inspector observed the base material had been cleaned of oxides and the weld joint appears to be in compliance with the WPS requirements. This QA Inspector measured a welding current of approximately 200 amps and 24.0 volts. This QA Inspector observed and Mr. Xiang Jie is certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

### OBG Bay 5

This QA Inspector observed ZPMC welder Mr. Wei Jin, stencil 067707 is using shielded metal arc procedure WPS-B-T-2112 to make shear link weld WDI-A305-65M1-20. This QA Inspector measured a welding current of 220 amps. This QA Inspector observed Mr. Wei Jin is certified to make this weld. It appears that ZPMC personnel had used electric heaters to preheat the base material where the weld is to be made. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed by this QA Inspector appear to comply with project specifications

### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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